

NO:5, wherein the high stringency conditions are selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour.

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16. (New) A method of producing a transgenic papaya plant with inhibited fruit senescence including the steps of:

(a) introducing into a papaya plant, plant part or plant cell a vector comprising a nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression and which hybridizes with a sequence of nucleotides set forth in SEQ ID NO:5 under high stringency conditions selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour;

wherein said isolated nucleotide sequence is operably linked, in a sense orientation, to one or more regulatory nucleotide sequences; and

(b) growing said plant, or regenerating said plant part or said plant cell to produce the transgenic papaya plant.

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17. (New) A method of producing a transgenic papaya plant with inhibited fruit senescence including the steps of:

(a) introducing into a papaya plant, plant part or plant cell a vector comprising a nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression and which hybridizes with a sequence of nucleotides set forth in SEQ ID NO:5 under high stringency conditions selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour;

wherein said nucleotide sequence is operably linked, in an antisense orientation, to one or more regulatory nucleotide sequences; and

(b) growing said plant, or regenerating said plant part or said plant cell to produce the transgenic papaya

plant.

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18. (New) A nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression, and which hybridizes under high stringency conditions with a sequence of nucleotides set forth in SEQ ID NO:7 or SEQ ID NO:9, wherein the high stringency conditions are selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour.

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19. (New) A method of producing a transgenic mango plant with inhibited fruit senescence comprising:

(a) introducing into a mango plant, plant part or plant cell a vector comprising a nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression and which hybridizes with a sequence of nucleotides set forth in SEQ ID NO:7 or SEQ ID NO:9 under high stringency conditions selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour;

wherein said nucleotide sequence is operably linked, in a sense orientation, to one or more regulatory nucleotide sequences; and

(b) growing said plant, or regenerating said plant part or said plant cell to produce the transgenic mango plant.

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20. (New) A method of producing a transgenic mango plant with inhibited fruit senescence including the steps of:

(a) introducing into a mango plant, plant part or plant cell a vector comprising an isolated nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression and which hybridizes with a sequence of nucleotides set forth in SEQ ID NO:7 or SEQ ID NO:9 under high stringency conditions selected from the group consisting of:

- (i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and
- (ii) 0.2 x SSC/0.1% SDS at about

68°C for about one hour;

wherein said nucleotide sequence is operably linked, in an antisense orientation, to one or more regulatory nucleotide sequences; and

(b) growing said plant, or regenerating said plant part or said plant cell to produce the transgenic mango plant.

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21. (New) A transgenic papaya plant produced by the method of Claim 16 or Claim 17.

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22. (New) A papaya fruit obtained from the transgenic papaya plant of Claim 21.

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23. (New) A transgenic mango plant produced by the method of Claim 19 or Claim 20.

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24. (New) A mango fruit obtained from the transgenic mango plant of Claim 23.

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25. (New) A vector comprising at least one copy of a nucleotide sequence which is of sufficient length to regulate the level of ACC synthase gene expression and which hybridizes under high stringency conditions with a sequence of nucleotides set forth in SEQ ID NO: 1, SEQ ID NO: 5, SEQ ID NO: 7 or SEQ ID NO: 9, wherein the high stringency conditions are selected from the group consisting of:

(i) 0.1 x SSC/0.1% SDS at about 68°C for at least about 20 minutes; and

(ii) 0.2 x SSC/0.1% SDS at about 68°C for about one hour.

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26. (New) The vector of Claim 25 wherein said nucleotide sequence is operably linked to at least one regulatory nucleotide sequence.--

No fee is believed due, however, please charge any fees or credit any overpayments to the Deposit Account No. 13-2165.

Respectfully submitted,

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Enclosures